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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,639	02/08/2006	Jan Matthijs Jetten	0470-048036	9145

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THE WEBB LAW FIRM, P.C.
700 KOPPERS BUILDING
436 SEVENTH AVENUE
PITTSBURGH, PA 15219

EXAMINER

CHAUDHRY, SAEED T

ART UNIT	PAPER NUMBER
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1792

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11/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,639	Applicant(s) JETTEN ET AL.	
	Examiner Saeed T. Chaudhry	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Applicant's preliminary amendments and remarks filed December 28, 2004 have been acknowledged by the examiner and entered. Claims 1-12 have been canceled and claims 13-22 are pending in this application for consideration.

Claim Rejections - 35 USC § 112

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 is indefinite in the recitation of "0.5 – 100 l", it is not clear what is meant by this term.

Double Patenting

Claims 13 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 of U.S. Patent No. 7,052,557.

Although the conflicting claims are not identical, they are not patentably distinct from each other because one of ordinary skill in the art would use a back flush step for removing contaminants from the surface of membrane filter as back flushing a filter is known in the art for fast removal of the contaminants from the membrane filter.

The non-statutory double patenting rejection, whether of the obvious-type or non-obvious-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); In re Van Ornam, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and In re Goodman, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78 (d).

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Effective January 1, 1994, a registered attorney or agent of record may sign a Terminal Disclaimer. A Terminal Disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 13-15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO-97/45523 in view of Kawanishi et al. and Schuchardt.

WO-97/45523 (hereinafter 523') discloses a method for cleaning a membrane filter used for filtering beverages such as milk, soft drinks, cider, wine and fruit juices by flowing through the membrane filter a cleaning solution of an oxidizing agent such as hypohalite, wherein hypohalite are hypochlorite and hypobromite. The pH of the cleaning solution is kept within the alkaline range between 7 to 12 (see pages 2 through 5). The reference fails to disclose a step of back flushing the membrane filter.

Kawanishi et al (5,647,988) disclose a method of cleaning membrane filter by back flushing the membrane filter with an aqueous solution of sodium hydroxide (see claims).

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Schuchardt (4,970,005) discloses a method of treating wastewater containing insoluble high molecular weight polyol impurities by reacting wastewater with an oxidizing agent such as hydrogen peroxide and optionally with a transition metal catalyst, wherein the transition metals are iron, manganese and zinc. The pH of the stream is greater than 7. (see abstract, col. 3, lines 51-67 and claims).

It would have been obvious at the time applicant invented the claimed process to incorporate the cited steps of back flushing the membrane filter as disclosed by Kawanishi et al into the process of '523 for purpose of cleaning a membrane filter, since it is well known in the art to back flush the filter for faster removal of the contaminants from the surface of the membrane filter, which does not clog the filter again. Further, Schuchardt discloses to use hydrogen peroxide with transitional metal as a catalyst to degrade the higher molecular polyol. Therefore, one of ordinary skill in the art would include transition metal as a catalyst as disclosed by Schuchardt into the process of '523 for disintegrating the higher molecular contaminants such as proteins and polyphenols. The references fail to disclose the back flush fluid rate. Furthermore, it would have been obvious at the time applicant invented the claimed process to manipulate the rate of back flush fluid for better and efficient results.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO-97/45523 in view of Kawanishi et al. and Schuchardt as applied to claim 13 above, and further in view of Doddema et al.

WO-97/45523, Kawanishi et al. and Schuchardt were discussed supra. However, the reference fails to disclose that the transition metal is complexed with polyamine.

Doddema et al. (5,667,690) discloses a method of removing phenols from waste water by treating with a complex of transition metal and a polyamine in the presence of peroxide, wherein peroxide is peracid (see abstract, col. 1, lines 32-46 and claims).

It would have been obvious at the time applicant invented the claimed process to incorporate polyamine in the process of 523' since Doddema et al. disclose that phenols compounds are effectively removed by treating with a complex of transition metal and polyamine in the presence of peroxide.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO-97/45523 in view of Kawanishi et al.

WO-97/45523 (thereafter 523') discloses a method for cleaning a membrane filter used for filtering beverages such as milk, soft drinks, cider, wine and fruit juices by flowing through the membrane filter a cleaning solution of an oxidizing agent such as hypohalite, wherein hypohalite are hypochlorite and hypobromite. The pH of the cleaning solution is kept within the alkaline range between 7 to 12 (see pages 2 through 5). The reference fails to disclose a step of back flushing the membrane filter.

Kawanishi et al (5,647,988) disclose a method of cleaning membrane filter by back flushing the membrane filter with an aqueous solution of sodium hydroxide (see claims).

It would have been obvious at the time applicant invented the claimed process to incorporate the cited steps of back flushing the membrane filter as disclosed by Kawanishi et al into the process of 523' for purpose of cleaning a membrane filter, since it is well known in the art to back flush the filter for faster removal of the contaminants from the surface of the membrane filter, which does not clogged the filter again.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO-97/45523 in view of Kawanishi et al. and Schuchardt as applied to claim 13 above, and further in view of Fermont et al.

WO-97/45523, Kawanishi et al. and Schuchardt were discussed supra. However, the reference fails to disclose a step of using an alkaline solution before using an oxidizing agent.

Fermont et al (4,740,308) disclose a method for cleaning fouled separation membrane with hydrogen peroxide and alkali metal hydroxides such as sodium hydroxide (see claims).

It would have been obvious at the time applicant invented the claimed process to incorporate hydrogen peroxide as an oxidizing agent as disclosed by Fermont et al in the process of 523', since 523 reference suggested to use an oxidizing agent and hydrogen peroxide is well known oxidizing agent. Further, Fermont et al disclose to use sodium hydroxide solution after using hydrogen peroxide solution. Therefore, one of ordinary skill in the art would have used sodium peroxide before using the oxidizing agent for neutralizing the oxidizing reaction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeed T. Chaudhry whose telephone number is (571) 272-1298. The examiner can normally be reached on Monday-Friday from 9:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Barr, can be reached on (571)-272-1414. The fax phone number for non-final is (703)-872-9306.

When filing a FAX in Gp 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access

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to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Saeed T. Chaudhry

Patent Examiner

/Michael Barr/

Supervisory Patent Examiner, Art Unit 1792